## REMARKS

Claims 1-24 are pending. Claims 1-24 are rejected. Reconsideration of Claims 1-24 is respectfully requested.

## 101 Rejection

Claims 1-24 are rejected under 35 USC 101 as being directed to non-statutory subject matter. It should be appreciated that a practical application such as is required by the patent rules for a process claim to be valid is produced by the embodiments of the invention that are set forth in Applicants' Claims. For example, the invention embodiment set forth in Claim 1 determines an action based upon an outcome relative to a subject. As such, the statutory process claim requirement of 35 USC 101 that a practical application be produced (in this case the determination of an action), is clearly met (See MPEP 2106 IV (B)(2)(b)). Consequently, the Applicants request the withdrawal of the rejection of Claims 1-24 under 35 USC 101.

## 103 Rejections

Claims 1, 3-9, 11-17 and 19-24 are rejected under 35 USC 103(a) as being obvious over Bertrand et al. in view of Cook et al., in view of Öten et al. and in further view of Hutchison. Applicants have reviewed the cited references and respectfully submit that the embodiments of the present invention as are set forth in Claims 1, 3-9, 11-17 and 19-24 are neither anticipated nor rendered obvious by Bertrand et al. in view of Cook et al., in view of Öten et al., in further view of Hutchison.

The Examiner is respectfully directed to independent Claim 1 which is drawn to a computer-implemented method for action selection based upon an objective of an

outcome relative to a subject. An excerpt from Claim 1 is reproduced below for the Examiner's convenience:

> a) acquiring and storing a training set, said training set an existent database of information, wherein said information are attributes of said subject, wherein said training set is to provide a base of data for said method; b) calculating and storing a best behavioral model for predicting said outcome, provided an action is applied to said subject; c) mapping of said training set to said best behavioral model within a business metric space, wherein said mapping is subsequently stored; d) selecting and storing a random sub-sample of said training set mapped to said best behavioral model, said random sub-sample for reducing computational requirements when determining an optimized strategy; and e) determining and storing said optimized strategy for said random sub-sample, said optimized strategy for providing an optimal action relative to said subject for said objective of said outcome.

Claims 9 and 17 recite limitations similar to those found in Claim 1. Claims 3-8, depend from independent Claim 1 and set forth additional limitations of the Claimed invention. Claims 11-16 depend from independent Claim 9 and set forth additional limitations of the Claimed invention. Claims 19-24 depend from independent Claim 17 and set forth additional limitations of the Claimed invention.

Bertrand et al. does not anticipate or render obvious a method for determining an action selection that is based upon an outcome relative to a subject that includes "a) acquiring and storing a training set, said training set an existent database of information, wherein said information are attributes of said subject, wherein said training set is to provide a base of data for said method" as is recited in Claim 1 (Claims 9 and 17 contain similar limitations). In contrast, the Applicants respectfully submit that Bertrand et al. discloses a dissimilar tutorial system designed to teach

through the use of a simulated environment and remedial feedback (Abstract). It should be appreciated that Bertrand et al. is concerned with the process of evaluating an end user's decisions for instructional purposes. However, Bertrand et al. is not concerned with the very different process of <u>determining action selection</u> as is set forth in Claim 1 (Claims 9 and 17 contain similar limitations).

It should be appreciated that the aforementioned limitations of Claim 1 (Claims 9 and 17 have similar limitations) detail expressly defined relationships (e.g., "storing and acquiring...to provide a base of data for said method") between expressly defined types of data constructs (e.g. training set, said method, etc.) that are simply not taught or suggested by Bertrand et al.

The outstanding Office Action equates the recited acquisition and storage of a training set for the purpose of providing a base of data for the method of action selection detailed in Claim 1 with a large number of elements and features disclosed in Bertrand et al. However, Applicants respectfully contend that many of these elements and features bear no resemblance to the elements and features they are equated to in Claim 1 (Claims 9 and 17 have similar limitations). For example, "acquiring and storing", within the context of the disclosure of the instant application, refers to the acquisition and storing of a training set such as that set forth in Claim 1, whereas acquiring and storing within the context of the disclosure of Bertrand et al. refers to the acquiring and storing of a data array. (See Column 80, line 41-46.). Thus, what is recited as being acquired and stored in Claim 1 (Claims 9 and 17 have similar limitations) is very different an clearly distinct from what is disclosed as being acquired and stored by Bertrand et al. Accordingly, Applicants respectfully submit that to equate the referenced elements of Bertrand et al. with the aforementioned

elements contained in Applicants' Claim 1 would not be reasonable in light of the Applicants' specification.

The Applicants respectfully submit that none of the referenced passages of Bertrand et al. describe the acquisition and storage of a training set that is an existent database of information that includes attributes of a subject, and provides a base of data for a computer implemented method of action selection as is set forth in Claims 1, 9 and 17.

Cook et al. does not teach or suggest a modification of Bertrand et al. that would remedy the deficiencies of Bertrand et al. discussed above. More specifically, Cook et al. does not teach or suggest a method for determining an action selection that is based upon an outcome relative to a subject as is set forth in Claim 1 (Claims 9 and 17 contain similar limitations). Cook et al. discloses a dissimilar system and method for interactive, adaptive and individualized computer-assisted instruction. In fact, nowhere in the Cook et al. reference is a method for determining an action selection that is based upon an outcome relative to a subject taught or suggested as is set forth in Claim 1 (Claims 9 and 17 contain similar limitations).

Öten et al. does not teach or suggest a modification of Bertrand et al. and Cook et al. that would remedy the deficiencies of Bertrand et al. and Cook et al. outlined above. More specifically, Öten et al. does not teach or suggest a method for determining an action selection that is based upon an outcome relative to a subject that includes "a) acquiring and storing a training set, said training set an existent database of information, wherein said information are attributes of said subject, wherein said training set is to provide a base of data for said method" as is set forth in

Claim 1 (Claims 9 and 17 contain similar limitations). Öten et al. is not concerned with a computer implemented method for action selection, as is set forth in Claim 1. Contrarily, Applicants respectfully submit that Öten et al. is concerned with the design of multidimensional systems for the analysis of complex data. It should be appreciated that while both the terms "training set" and "mapping" are mentioned, Öten et al. does not teach or suggest the expressly defined relationships set forth in Claim 1 (Claims 9 and 17 contain similar limitations).

More specifically, Öten et al. does not teach or suggest "acquiring and storing a training set, said training set an existent database of information wherein said training set is to provide a base of data for" a computer implemented method for action selection, nor does it discuss "mapping of said training set to best behavioral model within a business metric space, wherein said mapping is subsequently stored".

Hutchison does not teach or suggest a modification of Bertrand et al., Cook et al. and Öten et al. that would remedy the deficiencies of Bertrand et al., Cook et al., and Öten et al. discussed above. More specifically, Hutchison does not teach or suggest a method for determining an action selection that is based upon an outcome relative to a subject as is set forth in Claim 1 (Claims 9 and 17 contain similar limitations). Hutchison discloses a dissimilar adaptive autonomous agent with verbal learning. Hutchison is concerned with learning verbal as well as non-verbal behavior. However, nowhere in the Hutchison reference is a method for determining an action selection that is based upon an outcome relative to a subject taught or suggested as is set forth in Claim 1 (Claims 9 and 17 contain similar limitations). Consequently, Hutchison, alone or in combination with Bertrand et al., Cook et al., and Öten et al.

does not anticipate or render obvious the embodiments of Applicants' invention as set forth in Claims 1, 9, and 17.

Therefore, the Applicants respectfully submit that the claimed embodiments of the invention as set forth in Claims 1, 9 and 17 are in condition for allowance. Accordingly, the Applicants also respectfully submit that Claims 3-8, 11-16, and 19-24, dependent on Claims 1, 9 and 17 respectively, overcome the Examiner's basis for rejection under 35 U.S.C. 103(a) as they are dependent on allowable base claims.

Claims 2, 10, and 18 are rejected under 35 USC 103(a) as being obvious over Bertrand et al. in view of Cook et al and in view of Öten et al. and in further view of Yumoto et al. The remarks presented above regarding Bertrand et al., Cook et al., and Öten et al. apply to the discussion of Claims 2, 10, and 18 as well.

Yumoto et al. does not teach or suggest a modification of Bertrand et al., Cook et al., and Öten et al. that would remedy the deficiencies of Bertrand et al., Cook et al., and Öten et al. outlined above. The Applicants respectfully contend that nowhere in Yumoto et al. is their taught a computer implemented method for action selection based upon an objective of an outcome relative to a subject that includes the limitations that Cook et al., and Öten et al. are set forth in Claims 1, 9 and 17 (from which Claims 2, 10 and 18 depend). Consequently, Yumoto et al., alone or in combination with Bertrand et al., Cook et al., and Öten et al., does not anticipate or render obvious the embodiments of the Applicants' invention as set forth in Claims 1, 2, 10 and 18.

## Conclusion

In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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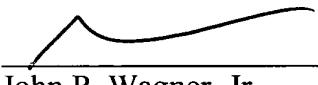
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